



November 18, 2010

Ms. Kimberly Tisa
PCB Coordinator
U.S. Environmental Protection Agency Region 1
5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

Re: PCB Remediation Plan Modification Request No. 3, rev. 1
Peabody Terrace Housing Facility – Buildings A, B, C, X
900 Memorial Drive, Cambridge, Massachusetts

Dear Ms. Tisa:

On behalf of the President and Fellows of Harvard College (Harvard), Woodard & Curran has prepared this modification request to the Notification¹ in accordance with Condition 17 of the United States Environmental Protection Agency's (EPA) April 15, 2010 Risk-Based PCB Cleanup and Disposal Approval under 40 CFR 761.61(c) and 761.79(h) (the Approval) for the Peabody Terrace Housing Complex in Cambridge, Massachusetts (the site). This modification request has been prepared for the ground-level concrete patios present outside of ten units at Building A and seven units at Building B.

The remediation plan referenced in the Notification indicated the following activities for the patios:

- Remove and dispose of off-site the existing replacement caulking between the patio pad and the building façade;
- Apply an epoxy coating (Sikagard 62) over the concrete in former direct contact with the caulking;
- Install new caulking over the epoxy in the joint; and
- Apply a clear acrylic coating (Sikagard 670W) over the entire concrete patio pad.

Although the characterization data for the concrete patio surfaces away from the joint met the high-occupancy cleanup level of 1 ppm, the plan indicated that they would be coated with the same product used on the vertical surfaces for weatherproofing and consistency purposes (i.e., a clear acrylic coating, such as Sikagard 670W). However, Harvard is proposing a modification to the plan for the acrylic coating at the request of the project engineer for the building façade renovation work, Simpson Gumpertz & Heger, Inc. (SGH). Because the ground level patio slabs are situated in direct contact with underlying soils, it is the opinion of SGH that a full-coverage low permeability coating (i.e., Sikagard 670W) would be prone to blistering and peeling failure over time due to moisture traveling upward from the soil through the concrete slab. Instead of coating the entire 7-foot wide slabs with Sikagard 670W, this modification request proposes, based on existing and subsequent characterization data collected, coating only a portion of the patio slab nearest to the building face, as described below.

¹ The Notification consists of the information submitted by Woodard & Curran to satisfy the requirements under 40 CFR 761.61(c), 761.62, and 761.79(h). Information provided was dated February 16, 2010 (Building A Plan); April 6, 2010 (Buildings B, C, X Plan); April 9, 2010 (e-mail clarification); April 29, 2010 (certifications); May 13, 2010 (contractor workplan); June 2, 2010 (response contractor workplan comments); and July 21, 2010 (Modification Request No. 1 - Powerwashing).



Characterization Data

Two patios at Building A and one patio at Building B were sampled during initial characterization work in October 2009 and March 2010. Samples of the Building A patios were collected from concrete in direct contact with the caulking, from concrete within 0.5 inches of the caulking, and from two random locations on the patio slab. Samples of the Building B patio were collected from concrete at two random locations on the patio slab. All ten of these samples were reported with PCBs < 1 ppm, with four samples reported as non-detect for PCBs.

In support of this modification request, Woodard & Curran collected bulk concrete samples from six additional patios at Buildings A and B to increase the characterization frequency to 50% of the patios. Concrete samples were collected in October 2010 at a distance of 12 inches from the caulking at the façade/patio slab joint. As summarized in Table 1, these results were reported with PCBs ranging from 0.189 to 1.28 ppm, with only one result reported above 1 ppm (the patio at Unit 20-12 of Building A).

Proposed Modification Request

Given that the concrete slabs at seven out of eight sampled patios were reported with PCBs at non-detect or < 1 ppm levels and the concerns about the long-term durability of a low-permeability coating on the entire surface of the ground level patios, the following modification request is proposed:

- No changes to the replacement caulking removal, epoxy coating, and new caulking installation as proposed in the original plan submittal;
- Modify the acrylic coating application from coating the entire pad surface to only coating the concrete within 24 inches of the building façade (area closest to the former caulked joint);
- Following application and to maintain consistency with the project's baseline sampling program, wipe samples from two patios from Building A and two patios from Building B will be collected for analyses (one sample per each patio slab);
- Incorporate monitoring of the coated surface over time into the project's long term maintenance and monitoring program developed for the Site.

The clear acrylic coating will be the same as being used on the vertical building surfaces, Sikagard 670W. By limiting the coating application to the area most likely to be impacted by PCBs (within 24 inches of the building façade), the moisture beneath the concrete slab may continue to pass through the remaining uncoated concrete surface. The coating applied to the affected area will be more durable and less prone to blistering and peeling failure than a complete surface coating would be capable of achieving.

If you have any comments, questions, or require further information, please do not hesitate to contact me at the number listed above.

Sincerely,

WOODARD & CURRAN INC.

Jeffrey Hamel, LSP, LEP
Senior Vice President

cc: Karen Sardone, Harvard
Chris Packard, JLL

Table 1
Patio Bulk Characterization Data
Peabody Terrace - Cambridge, Massachusetts

Sample ID	Sample Description	Sample Date	Total PCBs	Reporting Limit	Sample ID	Total PCBs
Patio Concrete					Patio Caulking	
Building A						
PTA-CBC-2211-0224	Unit 22-11 Patio, 2.25' from east and 4.0' from south edge	10/22/09	0.056	0.033	PTA-CBK-1812-0332	27.8
PTA-CBC-2211-0225	Unit 22-11 Patio, 4.5' from east and 2.0' from north edge; flush with overhang	10/22/09	ND	0.033		
PTA-CBC-2211-0226	Unit 22-11 Patio, within 0.5 inches of the pad/wall joint	10/22/09	0.867	0.033		
PTA-CBC-2211-0227	Unit 22-11 Patio, direct contact sample (depth of joint)	10/22/09	0.34	0.033		
PTA-CBC-1812-0231	Unit 18-12 Patio, 2.0' from east and 4.5' from south edge	10/22/09	0.07	0.033	PTA-CBK-2211-0341	64.9
PTA-CBC-1812-0232	Unit 18-12 Patio, 4.5' from east and 2.25' from north edge; flush with overhang	10/22/09	ND	0.033		
PTA-CBC-1812-0230	Unit 18-12 Patio, within 0.5 inches of the pad/wall joint	10/22/09	0.529	0.033		
PTA-CBC-1812-0229	Unit 18-12 Patio, direct contact sample (depth of joint)	10/22/09	0.479	0.033		
PTA-CBC-1912-0853	Unit 19-12 Patio, 12-12.5" from caulked joint, 6' north of southern patio edge	10/04/10	0.189	0.033		
PTA-CBC-2012-0854	Unit 20-12 Patio, 12-12.5" from caulked joint, 1.5' south of northern patio edge	10/04/10	1.28	0.076		
PTA-CBC-2112-0855	Unit 21-12 Patio, 12-12.5" from caulked joint, 5' north of southern patio edge	10/04/10	0.281	0.033		
Building B						
PTB-CBC-1412-0391	Unit 14-12 Patio, 2' from wall, 2' west of east edge	03/01/10	ND	0.33	PTB-CBK-1412-0393	50.8
PTB-CBC-1412-0392	Unit 14-12 Patio, 5.5' from wall, 5.5' west of east edge	03/01/10	ND	0.33		
PTB-CBC-1511-0856	Unit 15-11 Patio, 12-12.5" from caulked joint, 5' east of western patio edge	10/04/10	0.303	0.033		
PTB-CBC-1611-0857	Unit 16-11 Patio, 12-12.5" from caulked joint, 2.5' east of western patio edge	10/04/10	0.354	0.033		
PTB-CBC-1711-0858	Unit 17-11 Patio, 12-12.5" from caulked joint, 1.5' west of eastern patio edge	10/04/10	0.382	0.033		

Notes:

1. All samples were extracted by USEPA Method 3540C (Soxhlet) and analyzed by USEPA Method 8082.
2. All sample results are presented in milligrams per kilogram (mg/kg).
3. ND = Not detected above laboratory's minimum reporting limit, as indicated.